

(19) World Intellectual Property
Organization
International Bureau



26 APR 2005

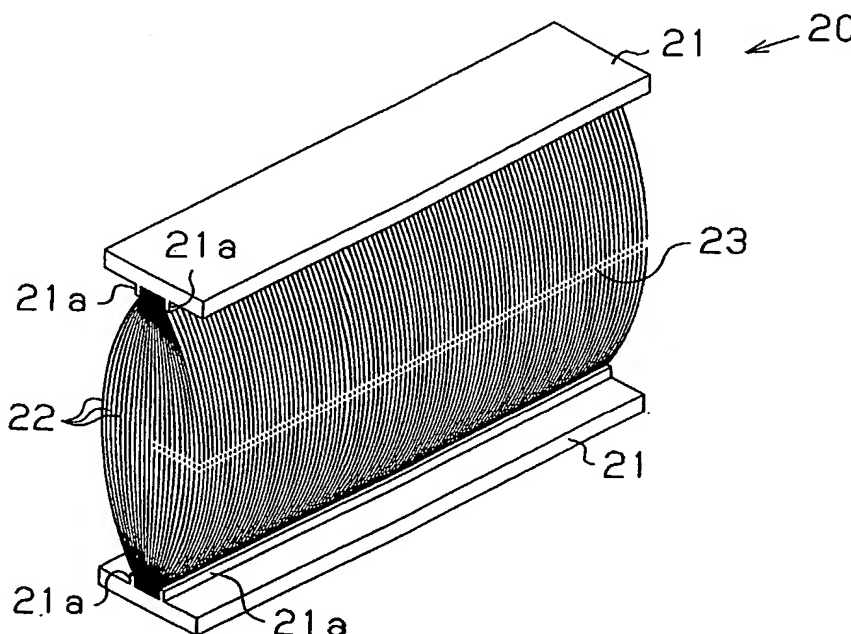
(43) International Publication Date
21 May 2004 (21.05.2004)

PCT

(10) International Publication Number
WO 2004/042248 A2

- (51) International Patent Classification⁷: **F16F**
- (21) International Application Number: PCT/US2003/034393
- (22) International Filing Date: 30 October 2003 (30.10.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
NO.2002-318046 31 October 2002 (31.10.2002) JP
- (71) Applicant (for all designated States except US):
TSUCHIYA TSCO CO., LTD. [JP/JP]; 43-1, Ura-jinkiri, Ushita-cho, Chiryu-shi, Aichi 472-0007 (JP).
- (71) Applicant (for all designated States except JP, US): **UL-TRAFAB, INC.** [US/US]; 1050 Hook Road, Farmington, NY 14425 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **OHARA, Yasuyuki** [JP/JP]; 2-11-2, Houou-cho, Chikusa-ku, Nagoya-shi, Aichi 464-0057 (JP). **TAKAMI, Hajime** [JP/JP]; 11-1, Kameyamashita, Anjo-cho, Anjo-shi, Aichi 446-0026 (JP). **KAWASHITA, Takashi** [JP/JP]; 74, Gounaka, Takunoshima-cho, Nishio-shi, Aichi 445-0072 (JP).
- WYLIE, Grant** [US/US]; 5240 Old Bald Hill Road, Hemlock, NY 14466 (US).
- (74) Agent: **FURRER, Brian**; 12-1, Ohmiya-cho 2-chome, Gifu-shi, Gifu 500-8731 (JP).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CUSHIONING MEMBER AND METHOD OF MANUFACTURING THE SAME



(57) Abstract: A cushioning member is located between each support frame and the corresponding side of the shutter. The cushioning member includes a pair of belt-shaped base members and pile yarns bridging between the base members. Some of the pile yarns are cut at intermediate portion between the base members, which forms opposing first and second cut pile yarns with a cut in between. One of the base members is attached to each support frame, and the other base member contacts the shutter. The cut permits the cushioning member to flexibly respond to movements of the shutter and satisfactorily exerts a cushioning function to suppress swaying of the shutter.